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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/018,854	04/02/2002	Kunitoshi Hayashi	I-183	8323

802 7590 10/24/2002

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EXAMINER

LIANG, LEONARD S

ART UNIT	PAPER NUMBER
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2853

DATE MAILED: 10/24/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

P.S.

**Office Action Summary**

Application No.

10/018,854

Applicant(s)

HAYASHI ET AL.

Examiner

Leonard S Liang

Art Unit

2853

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 April 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All   b) ☐ Some \* c) ☒ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)                      4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)                      5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2.                      6) ☐ Other: .

## **DETAILED ACTION**

### ***Priority***

1. Acknowledgment is made of applicant's claim for foreign priority based on an application filed in Japan on 06/30/99. It is noted, however, that applicant has not filed a certified copy of the 11/186804 application as required by 35 U.S.C. 119(b).

### ***Specification***

2. The disclosure is objected to because of the following informalities: On page 8, line 14, the specification states "The contact base 40 can be become..." This does not grammatically make sense. It will be construed that the statement should read "The contact base 40 can become..." Appropriate correction is required.

### ***Claim Objections***

3. Claim 11 is objected to because of the following informalities: The claim states "The ink-jet imaging apparatus...wherein the contact base follows the first circuit face or the second circuit face by swing movement around the touching point of the protrusion touching the carriage as the center." This is not grammatically correct. It will be construed that the claim should state "The ink-jet imaging apparatus...wherein the contact base follows the first circuit face or the second circuit face by swing movement around the touching point of the protrusion touching the carriage **at** the center." Appropriate correction is required.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

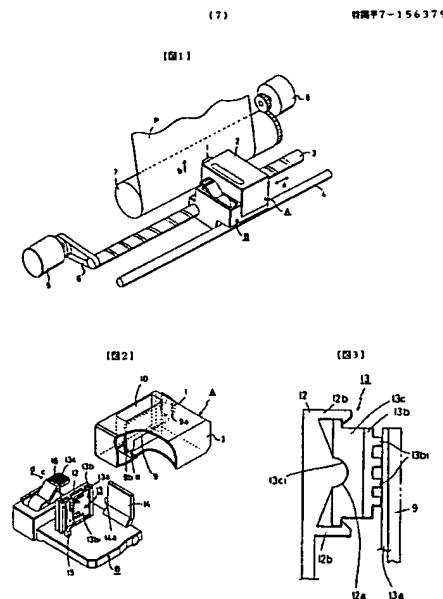
(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-14 are rejected under 35 U.S.C. 102(b) as being anticipated by Ara (JP Pat 07156379).

Ara discloses:

- {claim 1} An ink-jet imaging apparatus (figure 1) which is provided with a printing head having a first circuit face having plural first electric points (figures 2-3, reference 9; Detailed Description page 1, lines 24-25; the first electric points are inherent to the base plate 9 because otherwise, there could be no electrical transmission between the carriage and the print head), and a carriage having a second circuit face having plural second electric connection points to be connected respectively to the first electric connection points (figure 2, reference 13; page 1, lines 24-25), and which forms an image by ejecting an ink from the printing head (figure 1, reference 2) with reciprocating movement of the carriage (figure 1, reference a; Detailed Description page 3, lines 8-18) in a main scanning direction in accordance with image signals transmitted through the first electric connection points (Detailed Description page 1, lines 3-5), wherein one of the first circuit face and the second circuit face moves to follow the other circuit face (figure 1, references A, B)

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- {claim 2} the first circuit face follows the second circuit face by movement in a direction crossing the second circuit face (figure 1, references A, B)
- {claim 3} the second circuit face follows the first circuit face by movement in a direction crossing the first circuit face (figure 1, references A, B)
- {claim 4} the first circuit face follows the second circuit face by movement in a direction nearly parallel to the second circuit face (figure 1, references A, B)
- {claim 5} the second circuit face follows the first circuit face by movement in a direction nearly parallel to the first circuit face (figure 1, references A, B)
- {claim 6} contact base (figure 2, reference 13); pushing member (figure 2, reference 13b)
- {claim 7} the contact base follows the first circuit face by movement in a direction nearly parallel to the first circuit face (figure 1, references A, B; figure 2, reference 13)

- {claim 8} the contact base is replaced by another contact base which has the first circuit face fixed thereon and follows the second circuit face by movement in the crossing direction (figure 1, references A, B; Detailed Description page 1, lines 24-25; figure 2, reference 13; figure 3, reference 9)
- {claim 9} the contact base follows the second circuit face by movement in a direction nearly parallel to the second circuit face (figure 1, references A, B; Detailed Description page 1, lines 24-25; figure 2, reference 13; figure 3, reference 9)
- {claim 10} the contact base has a protrusion formed near the gravity center of the contact base and touching the carriage (figure 3, reference 13c)
- {claim 11} the contact base follows the first circuit face or the second circuit face by swing movement around the touching point of the protrusion touching the carriage at the center (figure 3, references 13c, 13c<sub>1</sub>; Detailed Description page 4, lines 14-24; abstract)
- {claim 12} the carriage has a protrusion to touch the contact base at or near the gravity center of the contact base (figure 3, reference 13c<sub>1</sub>)
- {claim 13} the contact base follows the first circuit face or the second circuit face by swing movement around the touching point of the protrusion touching the contact base as the center (figure 3, references 13c, 13c<sub>1</sub>; Detailed Description page 4, lines 14-24; abstract)
- {claim 14} the first circuit face or the second circuit face confronting the pushing member is flexible (figure 2, reference 13a)

*Conclusion*

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Wilson et al (US Pat 5461482) discloses an electrical interconnect system for a printer.

Uchikata et al (US Pat 6341844) discloses an apparatus using overlaid flexible cable for electrically connecting relatively moveable parts.

Robinson et al (US Pat 6224192) discloses inkjet printing systems using a modular print cartridge assembly.

Hall et al (US Pat 5598194) discloses a wiping structure for cleaning electrical contacts for a printer and ink cartridge.

Reid et al (US Pat 6174046) discloses a reliable contact pad arrangement on plastic print cartridge.

Nobel et al (US Pat 5953028) discloses an interconnect scheme for mounting differently configured printheads on the same carriage.

Plotkin et al (US Pat 6305786) discloses an unit printhead assembly for an ink-jet printer.

Watts et al (US Pat 6227651) discloses a lead frame-mounted ink jet print head module.

Eckard et al (US Pat 6164771) discloses a compact print cartridge with oppositely located fluid and electrical interconnects.

Nobel et al (US Pat 5684518) discloses an interconnect scheme for mounting differently configured printheads on the same carriage.

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Reid et al (US Pat 5706040) discloses a reliable contact pad arrangement on plastic print cartridge.

Nobel (US Pat 5796417) discloses a compliant interconnect assembly for mounting removable print cartridges in a carriage.

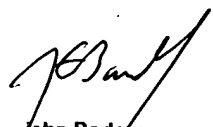
Harris et al (US Pat 5949453) discloses mixed resolution printing for color and monochrome printers.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Leonard S Liang whose telephone number is (703) 305-4754. The examiner can normally be reached on 8:30-5 Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Barlow can be reached on (703) 308-3126. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7724 for regular communications and (703) 308-7724 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

lsl LSL  
October 16, 2002

  
John Barlow  
Supervisory Patent Examiner  
Technology Center 2800